IN THE CLAIMS:

1. (currently amended) An imaging system comprising:

a gantry comprising:

a radiation source configured to generate a beam;

a collimator configured to collimate the beam to generate a collimated beam; and

a detector configured to detect the collimated beam, wherein the collimator is separate from said detector and comprises at least one radio opaque member having a curved contour proportional to a contour of the detector, wherein said collimator includes a first portion and a second portion spaced a distance from said first portion, wherein said first portion and said second portion are each configured to move along a direction substantially parallel to a rotational axis of said gantry, wherein each of said first portion and said second portion includes a first collimator point at a first collimator distance from said radiation source and a second collimator point at a second collimator distance from said radiation source, wherein said detector includes a first detector point at a first detector distance from the first collimator point and a second detector point at a second detector distance from the second collimator point, and wherein a sum of the first collimator distance and the first detector distance is equal to a sum of the second collimator distance and the second detector distance.

2. (currently amended) An imaging system in accordance with Claim 1 wherein said curved contour of said [[first]] collimator and said contour of said detector are concentric.

3. (currently amended) An imaging system in accordance with Claim 1 further comprising:

a linear drive mechanism configured to form an aperture [[of]] defined by said first [[collimator]] portion and said second portion, wherein the aperture has a size; and

a piezo-electric drive mechanism configured to change the size of the aperture ~~of said first collimator~~, wherein said linear drive mechanism is separate from said piezo-electric drive mechanism.

4-9. (canceled)

10. (previously presented) An imaging system in accordance with Claim 1 wherein said collimator is located between a subject and said radiation source.

11. (currently amended) A computed tomography imaging system comprising:

a gantry comprising:

an x-ray source configured to generate a beam;

a collimator configured to collimate the [[x-ray]] beam to generate a collimated x-ray beam; and

a detector configured to detect the collimated x-ray beam, wherein the collimator is separate from said detector and comprises at least one radio opaque member having a curved contour proportional to a contour of the detector, ~~wherein said collimator~~ wherein said at least one radio opaque member comprises a first portion and a second portion spaced a distance from said first portion, wherein said first portion and said second portion are each configured to move along a direction substantially parallel to a rotational axis of said gantry, wherein each of said first portion and said second portion includes a first collimator point at a first collimator distance from said x-ray source and a second collimator point at a second collimator distance from said x-ray source, wherein said detector includes a first detector point at a first detector distance from the first collimator point and a second detector point at a second detector distance from the second collimator point, and wherein a sum of the first collimator distance and the first detector distance is equal to a sum of the second collimator distance and the second detector distance.

12. (currently amended) A computed tomography imaging system in accordance with Claim 11 wherein said curved contour of said [[first]] collimator and said contour of said detector are concentric.

13. (currently amended) A computed tomography imaging system in accordance with Claim 11 further comprising:

a linear drive mechanism configured to form an aperture of said first collimator, wherein said aperture has a size; and

a piezo-electric drive mechanism configured to change the size of said aperture [[of]] defined by said first [[collimator]] portion and said second portion, wherein said linear drive mechanism is separate from said piezo-electric drive mechanism.

14-19. (canceled)

20. (currently amended) A method for reducing dosage of radiation incident on a subject, said method comprising:

providing a gantry that comprises a radiation source, a collimating device, and a detector;

transmitting, from a radiation source, a beam of radiation toward the subject;

collimating the beam of radiation before the beam reaches the subject; and

detecting, by [[a]] the detector, the collimated beam of radiation, wherein the collimating is performed by [[a]] the collimating device that is separate from the detector and includes at least one radio opaque member having a curved contour proportional to a contour of a detector that detects the collimated beam, ~~wherein the collimating device includes~~ wherein the at least one radio opaque member includes a first portion and a second portion spaced a distance from the first portion, wherein the first portion and the second portion are each configured to move along a direction substantially parallel to a rotational axis of the gantry, wherein each of the first portion and the second portion includes a first collimator point at a first collimator distance from the radiation source and a second collimator point at a second collimator distance from the radiation source, wherein the detector includes a first detector point at a first detector distance from the first collimator point and a second detector point at a second detector distance from the second collimator point, and

wherein a sum of the first collimator distance and the first detector distance is equal to a sum of the second collimator distance and the second detector distance.

21. (previously presented) An imaging system in accordance with Claim 1 wherein the at least one radio opaque member comprises at least two cams positionable relative to each other to form a plurality of differently sized apertures.

22. (previously presented) An imaging system in accordance with Claim 1 wherein the collimator is configured to move in a direction perpendicular to a plane formed by the beam of the radiation source.